Category （科目区分）	Cluster common basic subject		
Course Title （授業科目名）	Basic medical techniques training "cell staining and observation"		
Instructors （担当者名）	Masamitsu Tanaka	Academic Year （配当年次）	1
Required Course / Elective Course （必修/選択）	Elective Course	Credits （単位数）	1
Class Format （授業形態）	experimental practice		
Schedule （開講期間）	Students will be notified by email after completing the course registration.		
Class Date/Period （開講曜日・時間）	Students will be notified by email after completing the course registration.		

Course Outline/ Course Objectives（授業の概要・到達目標）

Purpose of class: By regularly attending various designated seminars and lectures, you can learn about cell staining and observation methods.
Achievement goal of class: Learn basic cell staining methods and observation methods.
Class outline:
1. To understand the most common tissue staining.
2. To understand how to observe fibrous tissue found in multiple diseases such as collagen fibers.
3. To understand how to identify fat cells.
4. To understand the staining of cells and substrates that constitute bone.
5. To understand the staining of cartilage, tooth cells, and extracellular substrates.
6. To understand how to identify nerve cells and glial cells.
7. To understand the most common enzyme-antibody methods for immunostaining.
8. To understand how to observe with fluorescence as immunostaining.
9. To understand the in situ hybridization using RNA probes.
10. To understand the enzyme antibody method and the method of multiple fluorescent staining.

Course Planning（授業計画）

	Course Outline/ Course Objectives（授業の概要及び到達目標） （Contents of Class）　（（授業内容））	Instructor （担当教員名）	Department （講座名） Class Room 〔実施場所〕
1	HE staining	Professor Masamitsu Tanaka	Department of Molecular Biochemistry 〔 Seminar Room, laboratory 〕
2	Staining of fiber components		
3	Fat staining		
4	Bone staining		
5	Cartilage and tooth staining		
6	Staining of brain tissue		
7	Enzyme antibody method		
8	Fluorescent staining		
9	in situ hybridization method		
10	Multiple staining of tissues		

Grading Criteria （成績評価の基準と方法）

30 hours of experimental training in the seminar room + 15 hours of self-study, 45 hours in total is counted as 1 credit, attendance status, the results of the oral and written examinations and the contents of the submitted report will be taken into consideration to evalue.

Contact Information（問い合わせ先(氏名，メールアドレス等)）

Name： Masamitsu Tanaka　　/ E-mail： mastanak@med.akita-u.ac.jp

Comment （その他特記事項）

Information about the course: If you cannot attend the training due to work, we will adjust the schedule.
Textbooks / References: Distribute materials as needed. Alternatively, specify the document.
Self-study content during self-study time: It is desirable to carry out preparatory learning according to the goals to be achieved and the content of the lesson.